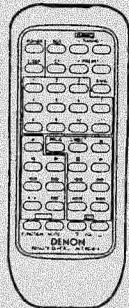


DENON

Hi-Fi CD AMP Tuner System

MODEL RCD-100

CD AMP TUNER



Note: The illustrations used here may differ slightly from the actual unit.

MAIN FEATURES

- RDS reception (FM only)
RDS programs can be easily received (FM only).
- AM/FM 30-station random preset tuner
Random presetting permits easy operation and will be convenient for the increased number of FM stations in the future.
- Independent power amplifier designed for quality sound
High quality 45 W per channel power amplifier with large speaker terminals.

- Super linear converter and high performance digital filter
Denon's unique systems for preventing loss of CD sound quality permit excellent sound field reproduction.
- Easy-to-use remote control unit

BEFORE USING

Note the following points before using the RCD-100.

- **Moving the system**
To prevent short-circuiting or damage of the connection cords, be sure to unplug the power cord and disconnect all connection cords before moving the system.
In addition, always remove CDs before moving the system. Failing to do so may result in scratched CDs.
- **Before switching on the power**
Check again that all connections are proper and that the connection cords are not damaged. Be sure to disconnect the power plug before disconnecting or connecting the connection cords.

- Hum may be produced if a TV set or another audio component is set near this system or their connection cords are nearby. If this happens, try changing the position of the equipment and connection cords.
- Do not move the system abruptly from a cold place to a warm place, since this may cause water droplets (condensation) to form in the equipment, preventing proper operation. If this happens, wait one hour before using the system.

Check that the following parts are included in the package aside from the main unit:

① Operating Instructions	1	④ Remote Controller	1
② FM Indoor Antenna	1	⑤ R6P Batteries	2
③ AM Loop Antenna	1	⑥ AC Cord	1

NIPPON COLUMBIA CO., LTD.

TABLE OF CONTENTS

General Section (Page 1 ~ Pages 21)

● Main Features	1
● Before Using	1
● Main Specifications	3
● Operating Instructions	4 ~ 21

Receiver Section (Pages 22 ~ Pages 70)

● Disassembly Procedures	22 ~ 25
● Block Diagram	26, 27
● Level Diagram	28
● Adjustment	28 ~ 33
● Semiconductors	34 ~ 48
● Microprocessor Documentation	49 ~ 52
● Microprocessor Peripheral Wiring Diagram	53
● Printed Wiring Board, Parts List	54 ~ 64
● Remote Control Unit	65
● Wiring Diagram	66
● Schematic Diagram	67, 68
● Exploded View, Parts List	69
● Parts List of CD Mechanism Unit	70

Only discs with the mark at the right can be played on this system.



PACKING & ACCESSORIES PARTS LIST

Ref. No.	Part No.	Part Name	Remarks	Qty
● 1	RCD 100	CD AMP Tuner		1
● 2	505 0131 050	Cabinet Cover		1
● 3	503 9308 105	Cushion Ass'y		1
● 4	501 9297 003	Carton		1
● 5	GEN 7842	Envelope Sub Ass'y		1 ⁵
— 5-1	505 0283 018	Poly Cover	(1)	
— 5-2	511 9466 006	Inst Manual	(1)	
— 5-3	399 9054 009	RM Control	RC-814	(1)
— 5-4	394 0040 004	Battery(R6P/UM-3) Ass'y		(1)
— 5-5	395 0023 008	FM Ant Ass'y	L=1.8 m	(1)
— 5-6	231 1914 003	Loop Antenna		(1)
▲ 5-7	206 2108 003	AC Conn. With Plug	L=1.8 m	(1)

SPECIFICATIONS

■ Receiver (UCD-100)

● Tuner

Reception Frequency Range:	FM: 87.50 MHz to 108.00 MHz AM: 522 kHz to 1611 kHz
Receiving Sensitivity:	FM: 1.5 μ V, 75 ohms (SN ratio 30 dB) AM: 20 μ V (SN ratio 20 dB)
FM Stereo Separation:	40 dB (1 kHz)

● Amplifier

Rated Output Power:	45 W + 45 W (1 kHz, 4 ohm)
Jacks:	6.3 mm headphone jack
Bass Adjustment:	100 Hz \pm 8 dB
Treble Adjustment:	10 kHz \pm 8 dB
Loudness control:	100 Hz/10 kHz + 6 dB/ +3 dB
Jacks:	MD/AUX: Input jacks, recording output jacks
Power Supply:	Tape: Input jacks, recording output jacks
Power Consumption:	AC 230 V, 50 Hz 110W

● CD Player

Wow and Flutter:	Below measurable limits (\pm 0.001% W. Peak)
Sampling Frequency:	44.1 kHz
Light Source:	Semiconductor
Dimensions (max.):	434(w)×94(H)×342(D)mm (17-5/64"×3-45/64"×13-30/64")
Weight:	7.5kg(16lbs 8oz)

■ Remote Control Unit (RC-814)

Type:	Infrared pulse
Number of Buttons:	40
Dimensions (max.):	52.5(w)×150(H)×18.3(D)mm (2-1/16"×5-8/9"×12/16") (including batteries)
Weight:	100g(Approx.4.6oz)

* Maximum dimensions include controls, jacks, and covers.

(W) = width, (H) = height, (D) = depth

● For improvement purposes, specifications and functions are subject to change without advanced notice.

Please check the following items are included with the main unit in the carton:

(1) Operating Instructions	1
(2) AM Loop Antenna	1
(3) FM Antenna	1
(4) Remote Control RC-814	1
(5) Batteries R6 (AA)	2
(6) AC Cord	1

Vergewissern Sie sich, daß folgende Teile vollständig im Lieferumfang enthalten sind:

(1) Bedienungsanleitung	1
(2) MW-Rahmenantenne	1
(3) UKW-Antenne	1
(4) Fernbedienung RC-814	1
(5) Trockenzell-Batterien R6 (AA)	2
(6) Netzkabel	1

Veuillez vérifier que les articles suivants sont bien joints à l'appareil principal dans le carton:

(1) Mode d'emploi	1
(2) Antenne-cadre AM	1
(3) Antenne FM	1
(4) Télécommande RC-814	1
(5) Piles de format R6 (AA)	2
(6) Cordon secteur	1

Controllare che le parti seguenti si trovino imballate con l'apparecchio nella scatola di spedizione:

(1) Istruzioni per l'uso	1
(2) Antenna AM a telaio	1
(3) Antenna FM	1
(4) Telecomando RC-814	1
(5) Batterie a secco R6 (AA)	2
(6) Cavo d'alimentazione	1

Verifique que los artículos siguientes hayan sido suministrados con la unidad principal:

(1) Instrucciones de operación	1
(2) Antena AM de cuadro	1
(3) Antena de FM	1
(4) Unidad de control remoto RC-814	1
(5) Pilas secas R6 (AA)	2
(6) Cable de alimentación	1

Controleer of de volgende accessoires bij het hoofdtoestel in de doos zijn verpakt:

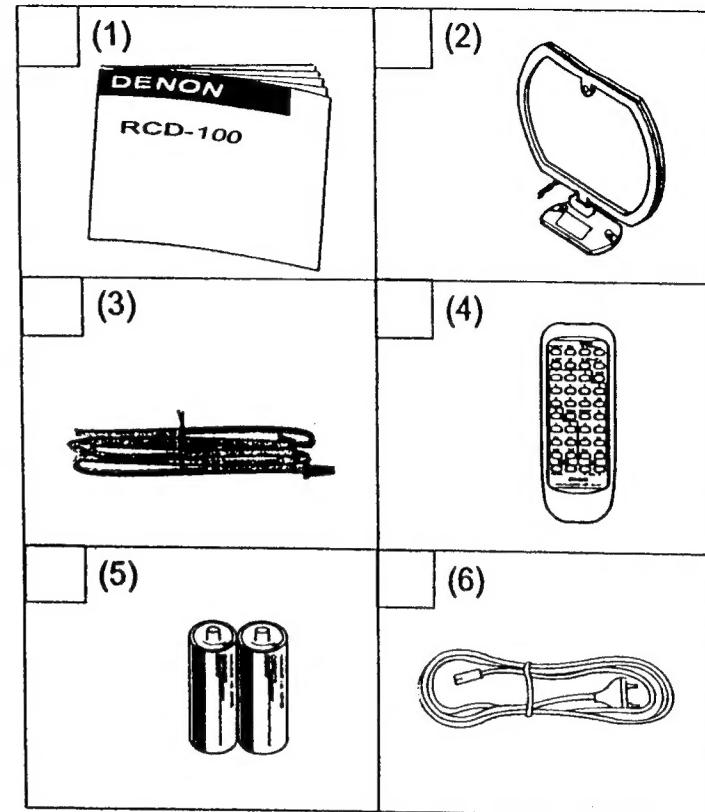
(1) Gebruiksaanwijzing	1
(2) AM-raamantenne	1
(3) FM-antenne	1
(4) Afstandsbediening RC-814	1
(5) R6 (AA) droge cel batterij	2
(6) Netsnoer	1

Kontrollera att följande tillbehör har packats ner i kartongen tillsammans med huvudenheten:

(1) Bruksanvisning	1
(2) Ramantenn för AM-bruk	1
(3) FM-antenn	1
(4) Fjärrkontroll RC-814	1
(5) R6 (AA) torrbatteri	2
(6) Nätkabeln	1

Verifique se os itens que se seguem estão incluídos na caixa de cartão com a unidade principal:

(1) Instruções de funcionamento	1
(2) Antena de quadro AM	1
(3) Antena FM	1
(4) Telecomando RC-814	1
(5) Pilhas R6 (AA)	2
(6) Cabo de alimentação	1



○ ENGLISH

• DECLARATION OF CONFORMITY

We declare under our sole responsibility that this product, to which this declaration relates, is in conformity with the following standards:

EN60065, EN55013, EN55020, EN60555-2 and EN60555-3.

Following the provisions of 73/23/EEC, 89/336/EEC and 93/68/EEC Directive.

DEUTSCH

• ÜBEREINSTIMMUNGSERKLÄRUNG

Wie erklären unter unserer Verantwortung, daß dieses Produkt, auf das sich diese Erklärung bezieht, den folgenden Standards entspricht:

EN60065, EN55013, EN55020, EN60555-2 und EN60555-3.

Entspricht den Verordnungen der Richtlinien 73/23/EEC, 89/336/EEC und 93/68/EEC.

FRANÇAIS

• DECLARATION DE CONFORMITÉ

Nous déclarons sous notre seule responsabilité quel l'appareil, auquel se réfère cette déclaration, est conforme aux standards suivants:

EN60065, EN55013, EN55020, EN60555-2 et EN60555-3.

D'après les dispositions des directives 73/23/EEC, 89/336/EEC et 93/68/EEC.

ITALIANO

• DICHIARAZIONE DI CONFORMITÀ

Dichiariamo con piena responsabilità che questo prodotto, al quale la nostra dichiarazione si riferisce, è conforme alle seguenti normative:

EN60065, EN55013, EN55020, EN60555-2 e EN60555-3.

In conformità con le condizioni delle direttive 73/23/EEC, 89/336/EEC e 93/68/EEC.

Questo prodotto è conforme al D.M. 28/08/95 N 548.

ESPAÑOL

• DECLARACIÓN DE CONFORMIDAD

Declaramos bajo nuestra exclusiva responsabilidad que este producto al que hace referencia esta declaración, está conforme con los siguientes estandares:

EN60065, EN55013, EN55020, EN60555-2 y EN60555-3.

Conforme con las provisiones de las directivas 73/23/EEC, 89/336/EEC y 93/68/EEC.

NEDERLANDS

• EENVORMIGHEIDSVERKLARING

Wij verklaren uitsluitend op onze verantwoordelijkheid dat dit produkt, waarop deze verklaring betrekking heeft, in overeenstemming is met de volgende normen:

EN60065, EN55013, EN55020, EN60555-2 en EN60555-3.

Volgens de bepalingen van de richtlijnen 73/23/EEC, 89/336/EEC en 93/68/EEC.

SVENSKA

• ÖVERENSSTÄMMELSESYNTYG

Härmed intygas helt på eget ansvar att denna produkt, vilken detta intyg avser, uppfyller följande standarder:

EN60065, EN55013, EN55020, EN60555-2 och EN60555-3.

Enligt stadgarna i direktiv 73/23/EEC, 89/336/EEC och 93/68/EEC.

PORTUGUÊS

• DECLARAÇÃO DE CONFORMIDADE

Declaramos sob nossa exclusiva responsabilidade que este produto, ao qual esta declaração corresponde, está em conformidade com as seguintes normas:

EN60065, EN55013, EN55020, EN60555-2 e EN60555-3.

De acordo com o estabelecido nas directivas 73/23/EEC, 89/336/EEC e 93/68/EEC.

PRECAUTIONS FOR INSTALLATION

Install RCD-100 always horizontally. To ensure sufficient ventilation, leave a space of at least 10 cm between the front, sides and back of the unit and walls or other object which may obstruct ventilation.

VORKEHRUNGEN FÜR DIE AUFSTELLUNG

Stellen Sie den RCD-100 stets waagerecht auf. Um eine ausreichende Lüftung zu gewährleisten, muß ein Zwischenraum von mindestens 10 cm auf der Vorder- und Rückseite sowie an den Seiten zwischen dem Gerät und einer Wand bzw. anderen Objekten vorhanden sein.

PRECAUTIONS D'INSTALLATION

Le RCD-100 doit toujours être installé horizontalement. Pour permettre une ventilation suffisante, vous devez laisser un espace libre d'au moins 10 cm entre les faces avant, latérales et arrière de l'appareil et les murs ou tout autre objet qui pourrait gêner l'aération.

PRECAUZIONI PER L'INSTALLAZIONE

Installare il RCD-100 sempre in posizione orizzontale. Per avere una sufficiente ventilazione, lasciare uno spazio di almeno 10 cm tra la parte anteriore, posteriore i lati dell'unità e le pareti o eventuali altri oggetti che potrebbero ostacolare la ventilazione.

PRECAUCIONES PARA LA INSTALACION

Instale siempre el RCD-100 en posición horizontal. Para garantizar una ventilación suficiente, deje un espacio de al menos 10 cm entre los lados anterior, posterior y laterales del equipo y las paredes u otros objetos que pudieran obstruir la ventilación.

VOORZORGSMATREGELEN VOOR INSTALLATIE

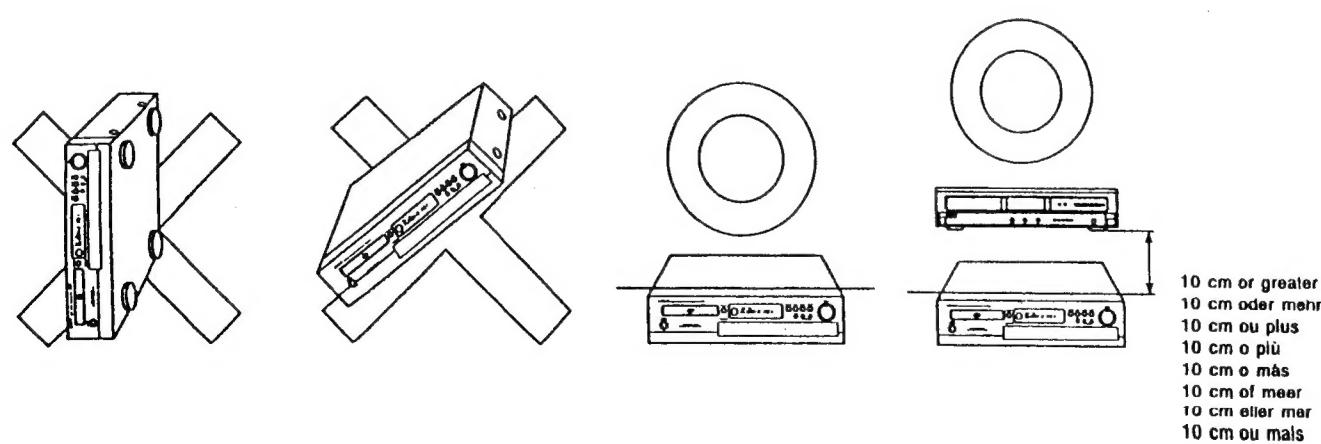
De RCD-100 altijd horizontaal plaatsen. Om voldoende ventilatie te garanderen dient u ten minste 10 centimeter ruimte open te laten tussen de voorkant, zijkanten, achterkant en de muur of andere voorwerpen die de luchttoevoer zouden kunnen blokkeren.

FÖRBEREDELSE FÖR INSTALLATION

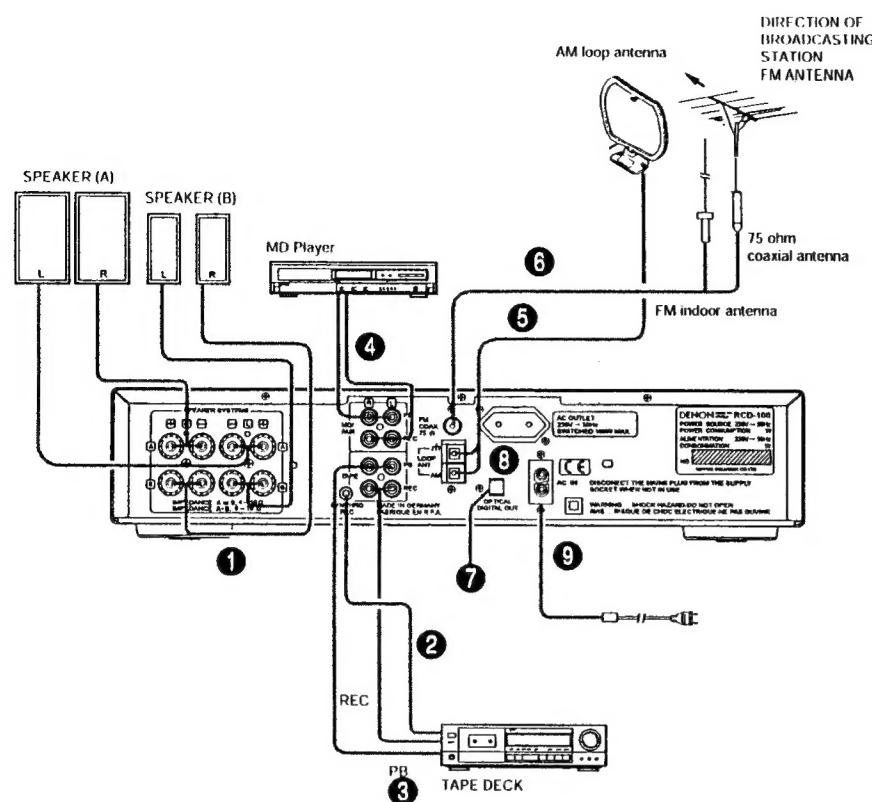
Installera alltid RCD-100 horisontellt. Ventilationen ska vara god. Lämna ett utrymme på minst 10 cm mellan enhetens sidor och väggen och eventuella föremål som kan hindra ventilationen.

PRECAUÇÕES DURANTE A INSTALAÇÃO

Instale sempre o RCD-100 em posição horizontal. Para assegurar a ventilação adequada, deixe um espaço de pelo menos 10 cm entre a frente, os lados e a parte de trás da unidade e paredes ou outros objectos que possam obstruir a ventilação.



10 cm or greater
10 cm oder mehr
10 cm ou plus
10 cm o più
10 cm o más
10 cm of meer
10 cm ou mais



REAR PANEL

1 SPEAKER SYSTEMS (Speaker terminals)

Two pairs of speakers A and B can be connected to these terminals.

2 SYNCHRO Jack

To make a synchronized recording, this jack must be connected to the SYNCHRO jack of the deck with a connection cord. (See page 16 for connections.)

3 TAPE

Tape decks can be connected for full use including playing or copying.

4 MD/AUX

MD or Video Disc may be connected here.

5 AM ANT (AM antenna terminals)

Connect the attached AM loop antenna. (Refer to page 8 for connections).

Connect to this terminal when a medium wave outdoor antenna is used.

6 FM ANT (FM antenna terminals)

75-ohm coaxial cable can be connected to this terminal. For antenna connecting procedure, see ANTENNA INSTALLATION.

7 DIGITAL OUT (OPTICAL)

This jack outputs digital data.

8 AC OUTLET (AC power outlet)

This AC outlet is controlled by the power switch. (Except units sold in U.K. and Eire)

9 AC Inlet

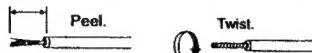
Connect the included AC cord here.

SPEAKER CONNECTION

Confirm polarity (+,-) and left and right channels (L, R). Connect the speaker pairs to the SPEAKER terminals on the back panel. Connections must be made with power cord disconnected.

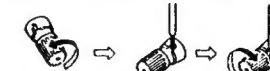
Preparing the cord

1. Peel off the sheath.
2. Twist the wires.



Connecting the front speaker terminals

1. Loosen by turning counterclockwise.
2. Insert the cord and tighten by turning clockwise.



ANTENNA INSTALLATION

• FM ANTENNA

The supplied indoor FM antenna can be used inside wooden houses for receiving local FM stations and other strong FM signals. Stretch out the end of the antenna and mount the antenna on the wall or ceiling where optimum reception is achieved. An indoor FM antenna may not consistently ensure stable reception, due to environment changes. In such cases, the indoor FM antenna should only be used temporarily until an outdoor FM antenna has been installed.

When connecting an outdoor FM antenna, the use of 75 ohm coaxial cable (3C-2V, 6C-2V) is strongly recommended.

• AM ANTENNA

Attach the supplied AM loop antenna even when using an outdoor AM antenna.

Connect the leads to the AM and GND terminals. Also use the AM terminals for connecting an outdoor AM antenna (when making such a connection do not disconnect the AM loop antenna).

Adjust the loop antenna to obtain optimum reception. Where broadcast stations are distant and only weak signals are received or where signals are blocked, it is best to install an outdoor AM antenna.

Assembling the Loop Antenna



- Remove the tie fastening the loop antenna's lead and connect the lead to the antenna terminals.

Notes:

- Do not connect two FM antennas simultaneously.
- Even if an external AM antenna is used, do not disconnect the AM loop antenna.
- Make sure AM loop antenna lead terminals do not touch metal parts of the panel.

CAUTION

Protective Circuit

This set is equipped with a high speed protective circuit. This circuit protects the internal circuitry from damage due to large currents flowing when the speaker jacks are not completely connected or when an output is generated by a short circuit.

This protective circuit's operation cuts off the output to the speakers. In such a case, be sure to turn the power to the set off and check the connections to the speakers. Then turn the power on again. After muting for several seconds, the set will operate normally.

Notes on Connection

- Do not plug the power cord into the AC wall outlet until all connections have been completed.
- Make sure channels are correctly connected. Connect Left channels to Left channels and Right channels to Right channels. Follow the color markings of plugs and terminals to make sure mistakes are not made.
- Connect all pin-plugs securely, pushing them completely into the jacks. Incomplete connections will cause noise generation.
- Binding the connection cables to power cords, or running such cables close to power supply transformers will cause humming or noise, and should thus be avoided.

DESIGNATIONS AND FUNCTIONS OF PANEL CONTROLS (REFER TO PAGE 3.)

FRONT PANEL

RECEIVER

① ON/STANDBY switch

When pressed once, the power is turned on and the display lights.

③ DISPLAY button

Use this switch to toggle between the function and time display. For example, when the function is set to the tuner, the display switches between the reception frequency and time.

When RDS stations or stations for which you have written characters yourself and stored in the memory are tuned in, press this button once to display the frequency, then press again to display the time.

④ MEMORY button

This button is used when presetting FM and AM stations.

⑤ TIMER button

This button is used to set the timer.

⑥ STANDBY button

Press this button to cause the timer to operate at the set time. When the timer has been set, pressing this button will light up the display's timer standby indicator (⌚), and pressing it again will switch off the standby indicator. The timer will not function when the standby indicator is off.

⑦ STEREO/MONO

(FM Stereo/mute/mono) button

This button will not function when receiving AM broadcasts.

(For FM reception)

AUTO: Use this mode to receive FM broadcasts in (mute) stereo.

("AUTO" appears on the display.) The muting circuit is activated to cut the hiss noise between stations.

MONO: In this mode, FM broadcasts are received in monaural, regardless of whether they are broadcast in monaural or stereo.

Set to the mono mode if there is much noise in the stereo mute mode (with "AUTO" displayed) or if the signals are weak.

⑧ TUNING UP and DOWN buttons

Use these buttons to tune in FM or AM stations and when setting the time and timer.

⑨ BASS control

Use this control to adjust the bass.

⑩ TREBLE control

Use this control to adjust the treble.

⑪ BALANCE control

Use this control to adjust the balance of the volume between the left and right channels. The volume is the same for the left and right channels when the control is at the center.

⑫ LOUDNESS (Loudness ON/OFF switch)

At low volumes, the human ear is less sensitive to low (BASS) and high (TREBLE) frequencies. Press this switch to compensate for this deficiency when listening at low volume levels.

⑬ SPEAKERS (Speaker selector switches)

These switches are used to select speaker system A and B. No sound is heard through the speakers when both switches are reset to the (■) position.

⑭ PHONES jack

Connect a pair of headphones (sold separately) to this jack for private listening.

⑯ VOLUME control

This control adjusts the overall volume. Turn clockwise (↑) to increase the volume, and counterclockwise (↓) to decrease it.

⑯ ⑰ PRESET (Preset station buttons)

These buttons are used for storing stations or recalling stations which have been preset. Using the PTY button you can preset a total of 30 FM or AM stations into preset channels.

Once a radio has been memorized, the same station can later be tuned in instantly simply by recalling the corresponding preset channel with PRESET UP or DOWN button.

⑳ RDS button

Use this button to automatically tune to stations using the radio data system.

㉑ BAND (FM/AM) button

With each press, the band is switched in the order of FM, AM, FM and so on.

㉒ FUNCTION button

Use this button to select the program source. The selection changes in the order of TUNER, CD, TAPE, and MD/AUX.

NOTE: The auto function serves to automatically switch the function when the operation buttons are pressed on the unit.

Tuner: BAND button

CD: Play button (▶)

㉓ DISPLAY

The display indicates a wide variety of information including: functions and MUTE of the amplifier, frequency and reception conditions of the tuner and number of tracks and time of the CD.

㉔ Remote control sensor

The remote control unit is pointed and operated toward this sensor.

CAUTION:

Whenever the ON/STANDBY switch is in the STANDBY position, the unit is still connected on AC line voltage.

DISPLAY

This lights to indicate that the timer is set.

Lights up when signals are received from the remote control unit.

This lights when the station is tuned in properly.



These indicate the FM reception mode.

STEREO: Lights when receiving stereo broadcasts.

AUTO: Lights when the auto mode is set with the MONO/STEREO button.

MONO: Lights when the mono mode is set with the MONO/STEREO button.

RDS (Radio Data System)

When the RDS button is pressed, a station is searched for and automatically tuned in, the "RDS" indicator lights and the station's name is displayed on the frequency display.

PTY (Program Type)

This indicator lights when the type of RDS program is specified.

TP (Traffic Program)

"TP" lights when an RDS traffic information station is received.

NOTE:

- The "⌚" of the timer standby display will not light up unless the current time and the timer have been set.

CD PLAYER

② REPEAT button

Press this button for repeat play.

⑬ Automatic Search Forward button (▷▷)

- Press this button to move the pickup forward to the beginning of the next track. Press again to move ahead to other tracks.
- By pressing the button a number of times, the pickup will advance the corresponding number of tracks.
- Press this button to move the pickup forward to the beginning of the desired track.

⑭ Automatic Search Reverse button (◁◁)

- Press this button to return the pickup to the beginning of the present track. Press again to return to other tracks.
- By pressing the button a number of times, the pickup will move back the corresponding number of tracks.
- Press this button to move the pickup back to the beginning of the desired track.

⑮ ■ STOP button

Press this button to stop CD play.

⑯ ▶ PLAY button

Press this button to start playing the disc. If pressed when the disc tray is open, the disc tray closes and playback begins. Pressing this button in the standby mode automatically switches on the power and plays the disc.

⑰ ▲ OPEN/CLOSE button

Press this button to open the disc tray. Press once to open the disc tray forward, then press again to close the disc tray. This button also operates in the standby mode.

⑯ Disc tray

Compact discs are loaded to the disc tray.

CD PLAYER DISPLAY

Track number display

UU is displayed when the disc data cannot be read properly.

When a disc is loaded:

- The total number of tracks is displayed in the stop mode.
- The track number is displayed in the play and program modes.
- JJ** or **CC** is displayed when the innermost or outermost section of the disc is reached in the manual search mode.

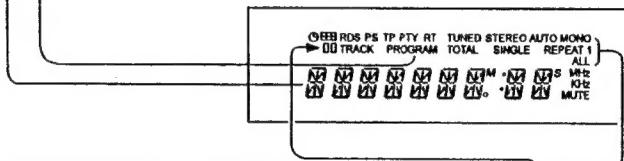
Time display

DD:DD is displayed when the disc data cannot be read properly.

When a disc is loaded:

- The elapsed playing time is displayed in the stop mode.
- The elapsed time for the track currently playing is displayed in the play and pause modes.
- The elapsed time for the programmed tracks is displayed in the program mode.

PROGRAM lights during the programmed selection mode.



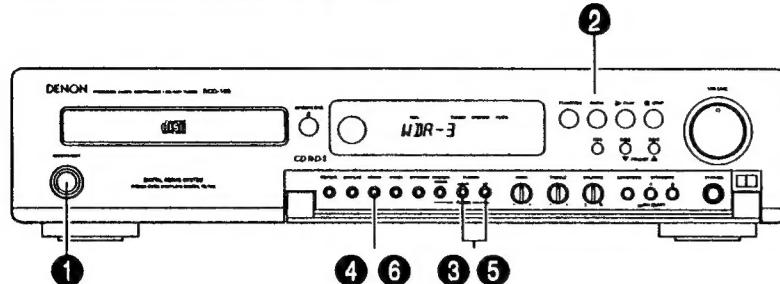
▶ PLAY lights when the disc is playing, and ■ PAUSE lights when in the pause mode.

The indicators switch as follows when the REPEAT button is pressed in the play mode:

REPEAT 1:	REPEAT 1 (single track repeat) The repeated track number lights on the music calendar.
REPEAT ALL:	REPEAT ALL (all tracks repeat) The track numbers of the tracks on the disc light.
Third press:	No display

LISTENING TO RADIO BROADCASTS

(Check that connections are proper, referring to Page 8)



Example: Tuning to 87.50 MHz, FM

1	Set the VOLUME control to the minimum position, then press the ON/STANDBY button of the receiver.	ON/STANDBY	
2	Select the FM band with the BAND button.	AM/FM	Set to FM. FM 50.00
3	Use the UP and DOWN buttons to set the frequency to 87.50 MHz.	TUNING DOWN UP	FM 87.50 Lights up when the station is tuned in. TUNED

Presetting FM and AM Stations

Example: Presetting the (currently tuned) FM 87.50 MHz to preset number 3

4	Press the MEMO button. "P --- M" flashes for 10 seconds.	MEMO	FM P --- M --- Flashes
5	Use the TUNING UP and DOWN buttons to call up the number to which you want to preset the station. Or, directly press the number buttons on the remote control unit. The preset number will flash.	TUNING DOWN UP	FM P 03 M --- Flashes
6	Press the MEMO button while "P03M" is flashing.	MEMO	FM P 03 M --- Set the preset number 3.

Up to 30 FM and AM stations can be preset at random using this procedure.

Note: The character writing mode is set if the MEMORY button is pressed in for over 3 seconds.

Auto Tuning

- When the TUNING buttons are pressed, the frequency changes in steps of 50 kHz for FM, 9 kHz for AM.
- If the TUNING UP or DOWN button is held in for more than 0.5 seconds, the frequency continues to change when the button is released. The next station is tuned in automatically and the tuning stops there. The auto tuning might not stop when a weak signal is received. At this time the TUNED display will not light. To stop the auto tuning, press the UP or DOWN button again.

Listening to Preset Stations

Example: Listening to the FM station preset at number 3

1	Press the TUNER BAND button on the remote control unit.	
2	Press button "3" on the remote control unit.	

FM Stereo Reception

- When the MONO/STEREO button is pressed (which lights the AUTO indicators) and an FM stereo broadcast is received, the STEREO indicator lights and the station is received in stereo. If the MONO indicator is lit by pressing the MONO/STEREO button, the STEREO indicator goes off and the station is received in monaural.

Notes on Presetting

- When an FM station is preset, the auto or monaural mode is also set, so check the display before presetting the station.
- If a station is preset to a number at which another station has previously been preset, the previous station is cleared and the new station is preset.
- If the power cord is unplugged, the preset memory is not cleared immediately, but will be cleared if the cord is left unplugged over a long period. Should this happen, preset the stations again.

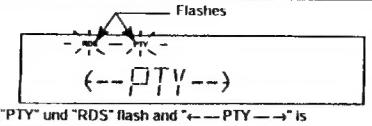
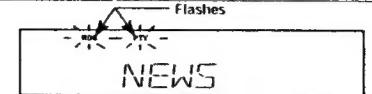
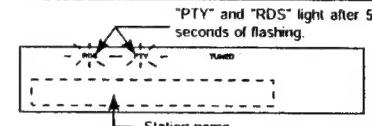
Receiving RDS broadcasts (FM only)

1	Press the BAND button and set the FM band.	
2	Press the RDS button once.	
3	Press the TUNING UP or DOWN button.	
4	The station is tuned in.	

Once the station is tuned in, "RDS" flashes for 5 seconds and the program service name is displayed. When another station is desired, press the UP or DOWN button of TUNING while "RDS" is flashing and start the tuning.

NOTE: If no RDS station is found, "NO RDS" is displayed.

PTY Search

1	Press the RDS button twice.	
2	Press the PRESET UP or DOWN button on the remote control unit to select the type of program. (One of the 15 types listed below can be selected.)	
3	Press the TUNING UP or DOWN button.	
4	The station is tuned in.	 <p>Once the station is tuned in, "RDS" and "PTY" flash for 5 seconds and the program service name is displayed. When the UP or DOWN button of TUNING is pressed while "RDS" and "PTY" are flashing, tuning is started again.</p>

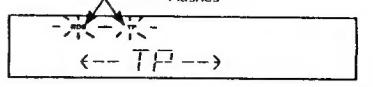
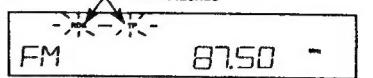
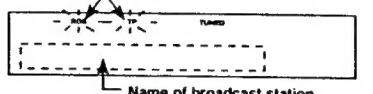
NOTE: If no program of the specified type is found, "NO PROG" is displayed.

Programs

NEWS	(News)	VARIED	(Varied)
AFFAIRS	(Current Affairs)	POP M	(Pop Music)
INFO	(Information)	ROCK M	(Rock Music)
SPORT	(Sport)	MOR M	(M.O.R. Music)
EDUCATE	(Education)	LIGHT M	(Light Classics)
DRAMA	(Drama)	CLASSICS	(Serious Classics)
CULTURE	(Culture)	OTHER M	(Other Music)
SCIENCE	(Science)	ALARM	(Alarm)

NOTE: ALARM cannot be selected during the PTY search operation.

TP Search

1	Press the RDS button 3 times.	
2	Press the TUNING UP or DOWN button of TUNING.	
3	Broadcast reception.	 <p>"TP" and "RDS" light after 5 seconds of flashing.</p> <p>Once the station is tuned in, "RDS" and "TP" flash for 5 seconds and the program service name is displayed. When the UP or DOWN button of TUNING is pressed while "RDS" and "TP" are flashing, tuning is started again.</p>

NOTE: "NO PROG" is displayed when there is no traffic information broadcast station.

NOTE:

The RCD-100 is designed so that RDS broadcasts can be received. In some countries and areas, however, no RDS broadcasts are offered.

- "PTY" is a code which identifies the type of program.
- "TP" is a code which identifies the station providing the traffic information.
- "CT" is a signal providing time data in one minute units.
- Some stations which provide RDS broadcasts do not broadcast CT signals, in which case the time display cannot be corrected by pressing the CT button on the remote control unit.

RDS Emergency Alarm

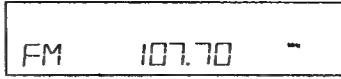
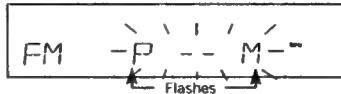
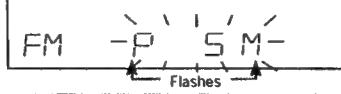
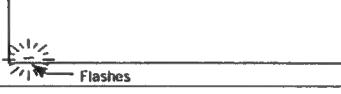
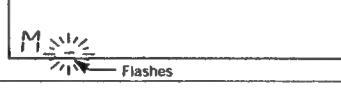
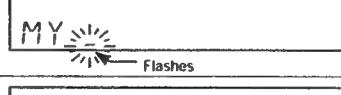
"ALARM" will flash on the display when the unit receives the Emergency Programme Type Code (PTY31) from an RDS station. This feature may not operate properly if the signal from the RDS station is too weak or is subjected to interference.

It is not possible to select the "ALARM" display from the PTY search mode.

Writing Characters

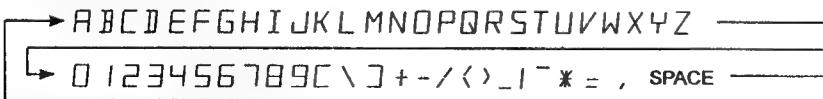
The RCD-100 includes a function for writing characters.

Example: Writing the characters "MY RADIO" for the station at FM 107.70 MHz and storing this at preset channel

1	Use the BAND button and the TUNING UP and DOWN buttons to display FM 107.70 MHz.	
2	Press the MEMO button for at least 3 seconds so that "P — M" flashes on the display.	
3	Use the TUNING UP and DOWN buttons to select preset channel 5.	
4	Press the MEMO button. The "—" begins to flash.	
5	Use the TUNING UP and DOWN buttons to select the character "M", then press the PRESET UP button on the remote control unit. The "—" stops flashing, and the "M" in the second place starts flashing.	
6	Use the TUNING UP and DOWN buttons to select the character "Y", then press the PRESET UP button on the remote control unit.	
7	Repeat this procedure to write "MY RADIO", then press the MEMO button. "PRESET" stops flashing and the character writing mode is cancelled.	

The characters which can be written are shown below.

- The characters change in the direction of the arrow when the PRESET UP button is pressed, and in the opposite direction when the PRESET DOWN button is pressed.
- The character sequence starts over from A each time a character is set.



NOTES:

- The cursor can be moved to correct a character by pressing the PRESET button during the character writing mode.
- Characters can also be written in the same way when in the AM mode.

7 USING THE TIMER

Setting the Timer

- Be sure to set the current time.
- Regular timer: The power can be switched on and off once every day at the same time. (Wake-up music)
- Sleep timer: The power can be set to turn off in up to 60 minutes in steps of 10 minutes using the remote control unit. (Bedtime music)

Be sure to preset stations before setting the timer.

Refer to "Presetting FM and AM Stations" on Page 11.

- Turn the standby switch off when not using the timer.
- It is not possible to set the timer on during CD-mode.

Power Failure

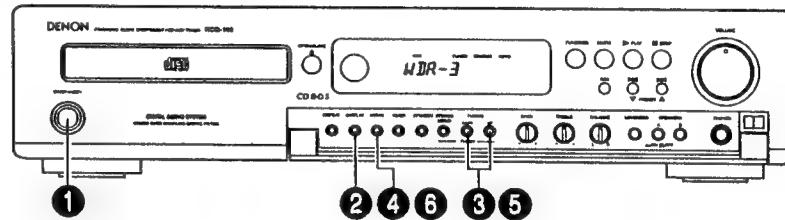
Should a power failure occur or if the power cord becomes unplugged from the power outlet, "00:00" will flash on the time display. If this happens, reset the current time.

(Reset the current time and timer settings. If "00:00" was displayed, also reset the stations preset on the tuner.)

The standby mark starts flashing if there is a power failure or the power cord is unplugged while the standby mark is lit. If this happens, reset the time and the timer. (If the display reads "00:00", also reset the tuner's preset channels.)

To make the standby mark stop flashing, press the TIMER button, then press the TIMER button while "FUNC" is displayed.

Setting the Current Time (A 24-hour clock display is used.)

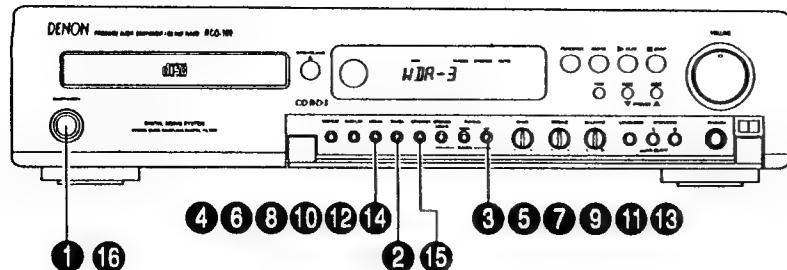


Example: Setting to 19:30 (7:30 p.m.)

1	Press the ON/STANDBY button of the receiver.	ON/STANDBY		
2	Press the DISPLAY button for 3 seconds or longer.	DISPLAY		 The hour's place flashes. (All places flash if the time has already been set.)
3	Set the hours with the UP and DOWN buttons.	TUNING DOWN UP		 The set places flashes.
4	Press the MEMO button.	MEMO		 The minutes' places flash.
5	Set the minutes with the UP and DOWN buttons.	TUNING DOWN UP		 The set places flash.
6	Press the MEMO button at the sound of a time signal. The time display lights steadily and the clock starts keeping the time.	MEMO		19:30 The display light steadily and the clock starts to count from 00 seconds.

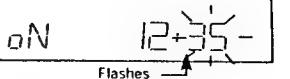
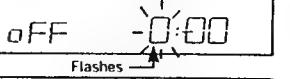
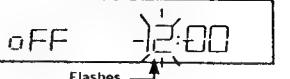
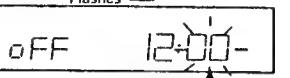
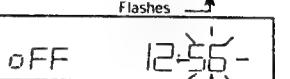
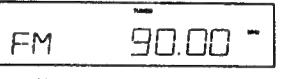
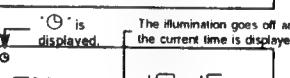
Setting the Timer

(Preset the FM and AM stations in advance)



Example: Setting the timer to turn on at 12:35 and off at 12:56.
 90.00 MHz FM is being received on preset number "1".
 87.50 MHz FM is set to preset number "3".

1	Press the ON/STANDBY button.	ON/STANDBY	TIMER	 
2	Press the TIMER button.	 		 
3	Press the UP and DOWN buttons to display "TUNER".	 		 
4	Press the MEMO button.	 		 
5	Use the UP and DOWN buttons to set the preset number 3.	 		 
6	Press the MEMO button.	 		 
7	Use the UP and DOWN buttons to set the hour at which the timer is to switch on.	 		 
8	Press the MEMO button.	 		 

9	Use the UP and DOWN buttons to set the minutes at which the timer is to switch on.	 		
10	Press the MEMO button.	 		
11	Use the UP and DOWN buttons to set the hour at which the timer is to switch off.	 		
12	Press the MEMO button.	 		
13	Use the UP and DOWN buttons to set the minutes at which the timer is to switch off.	 		
14	Press the MEMO button.	 		
15	Press the STANDBY button.	 		
16	Press the ON/STANDBY button.	 		

- When the STANDBY button is pressed and the "①" mark is lit, the timer will function at the same times each day.
- To switch off the timer, press the STANDBY button and turn off the "①" mark.

NOTE: The timer standby mark "①" will not light unless the current timer has been set. Should this be the case, set the current time, then press the STANDBY button.

NOTE:

- When there is an irregularity in the contents of the display or in the operation, unplug the power cord from the power outlet, then, while pressing down both the DOWN button of TUNING and the MEMORY button at the same time, plug the power cord into the power outlet again.
 All conditions will return to their initial settings and the display will appear normal. It will now be necessary to reset the presets, current time, and the timer setting time.
- To enable remote control operation of this system, the AC power is always supplied to the system. Even when the POWER button has been switched off, the display of the tuner will continue to be lit dimly.

Ways to Use the Timer

Example 1: Waking up to the music of a compact disc.

1 EVERYDAY TIMER

1	ON/STANDBY 	OPEN / CLOSE 		OPEN / CLOSE
	Press the receiver's ON/STANDBY button to switch on the power.	→ Press the CD player's OPEN/CLOSE button to open the tray.	→ Set the compact disc in the tray.	→ Press the OPEN/CLOSE button again to close the tray.
2	Press the receiver's TIMER button.			
3	Press the UP and DOWN buttons of the receiver to display "CD".	 TUNING DOWN UP		
4	Follow steps 6 to 16 under "Setting the Timer" on Page 14.			

Checking the Timer Settings

To check the timer settings, turn on the receiver's ON/STANDBY button, press the TIMER button. The timer start mode, reception band, preset number, on time, and off time are displayed in order each time the MEMORY button is pressed. One more press returns the display to the reception frequency.

Changing the Timer Settings

When the timer setting operation is repeated, the previous settings are deleted and the new settings are set.

Note about the Set Timer

If the set time of the timer is reached while the power is on, the timer settings will take over and there will be a switch to the function that has been set on the timer.

Cancelling the Timer

Press the STANDBY button and the "⊕" mark will go off.

Setting the Sleep Timer

(Use the remote control unit for these operations.)

Example: Setting the power to switch off in 50 minutes.

Currently receiving 87.50 MHz, FM.	FM 87.50 MHz	
 1 Press the remote control unit's SLEEP button.	 "SLEEP" appears and flashes for 5 seconds. "60" is displayed	
2 Press the SLEEP button again while "SLEEP" is flashing.	"50" is displayed, and the frequency display (87.50) reappears after 5 seconds.	The power will be switched off after 50 minutes.

- If the sleep timer and regular timer settings overlap, the sleep timer is given priority.
- Do not press the STANDBY button after the power has been switched on with the timer. If this is done, the timer will not function properly.
- If the same time is set for the on time and off time, the power will not be switched on even when the "STANDBY" indicator is lit.
- If the timer is set for an AM or FM station and the on time of the timer is reached while listening to another station, the tuner switches to the station which was set with the timer.
- When the SLEEP button is pressed and the "⊕" mark flashes, the sleep timer will operate at the same time.

Cancelling the Sleep Timer

- To cancel the timer while it is operating in the sleep mode, press the SLEEP button.
- Press the SLEEP button repeatedly until the power turns off. This cancels the sleep timer.

11 PLAYING CDs

Compact Discs

- Press the OPEN/CLOSE button (▲) once to open the disc tray, once again to close it.
- The disc tray can also be closed by pressing the play (▶) button.

When this is done, playback automatically starts from the first track on the disc (or if the tracks are programmed, the first programmed track).

- Load the disc with the label side facing up, being careful not to touch the disc surface.
- Load the disc with the disc tray guide at the center of the disc tray.

To play on 8 cm disc, place the disc in the sunken part at the center of the disc tray.

- When the disc tray is closed, the disc turns automatically for several seconds, and the number of tracks and total playing time appear on the display.



Only discs with this mark can be played.

- For CDVs, only the audio part is played (the video part is not played).

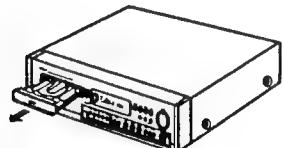
Disc	Remarks
CD	
CDV	Only the audio part is played.
CD single (8 cm)	

Handling the Disc Tray

Do not switch off the power or push or pull the disc tray when it is moving, since this may damage it.

If the cord of a set of headphones, etc., gets caught in the disc tray when it is closed, press the OPEN/CLOSE button (▲) again.

- Never set objects other than CDs in the disc tray, as this can cause damage.



Precautions:

- If no disc has been loaded or the disc has been placed upside down, all indicators will light.
- When the information on the disc cannot be read correctly, for example due to dust or dirt on the disc, the indicators will read as shown below. Nothing will be shown on the TRACK NO. and TIME displays, and it may take quite a while to read the disc.

15 54" 12^s

Normal display

00 00 00

Improper display

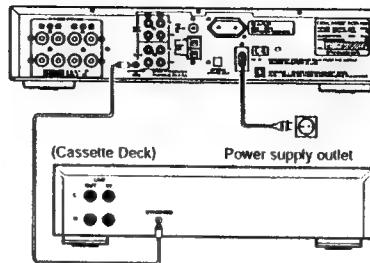
• SYNCHRO Jack Connections

Connect the SYNCHRO jack with a DENON cassette deck which is equipped with a SYNCHRO jack, then make a synchronized recording. Use the connection cord supplied with the cassette deck.

To make use of this function, also connect the output jacks and make the settings so that a recording can be made from the RCD-100 player to the cassette deck.

The remote control signal receive indicator of the display will blink during synchronized play.

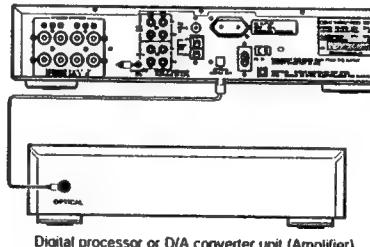
RCD-100



• Connecting the Digital Output Jack (OPTICAL)

Use an OPTICAL cable to connect the digital output jack (OPTICAL) of the RCD-100 to the digital input jack (OPTICAL) on a MD or D/A converter unit, available in stores.

RCD-100



Digital processor or D/A converter unit (Amplifier)

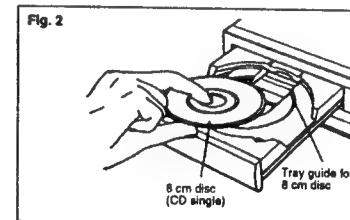
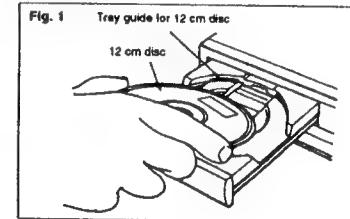
OPENING AND CLOSING THE DISC HOLDER AND LOADING A DISC

Opening and closing the disc holder (This operation only works while the power is on.)

- Press the ON/STANDBY switch to turn on the power.
- Press the OPEN/CLOSE button (▲).

How to load a disc

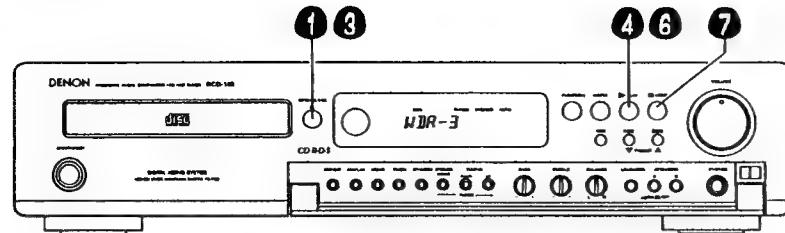
- Make sure the disc holder is completely open.
- Hold the disc by the edges and place it on the disc tray. (Do not touch the signal surface, i.e., the glossy side.)
- When using 12 cm diameter discs, make sure the outer edge matches the tray guide circumference (Fig. 1), and when using CD singles (8 cm diameter), match the outer edge with the inner tray guide circumference (Fig. 2).
- Press the OPEN/CLOSE button (▲) to close the disc holder.
- When the disc holder is closed, the disc is read and after a few seconds the number of tracks and total playing time are displayed on the TRACK NO. and TIME displays, respectively.
- When the disc holder is open and a disc is loaded, you may also press the play (▶ PLAY) or pause (■ PAUSE) button to close the disc holder. (If the play button (▶ PLAY) is pressed, playback will start immediately upon the disc contents having been read.)



Caution:

- If your finger should get caught in the disc holder when it closes, press the OPEN/CLOSE button (▲).
- Do not place any foreign objects on the disc tray, and do not place more than one disc on the tray at a time. Otherwise malfunction may occur.
- Do not push in the disc tray manually when the power is off as this may cause malfunction and damage the CD player.

Regular Play



Example: Playing a CD with 15 tracks and a total playing time of 62 minutes 03 seconds, starting from track 1

1	Press the ON/STANDBY button of the receiver, then press the OPEN/CLOSE button.	OPEN/CLOSE The disc tray opens	TRACK 00 00' 00"
2	Set the CD in the disc tray. Refer to Page 16.	 The display appears several seconds after the disc tray closes.	
3	Press the OPEN/CLOSE button.	OPEN/CLOSE The disc tray closes	TRACK 15 62' 03"
4	Press the PLAY button.	▶ PLAY CD play starts	▶ TRACK 01 16' 01"

To stop play temporarily: (Perform this operation from the remote control unit only.)

5	Press the PAUSE button.	 ▶ PAUSE	"▶ PLAY" goes off and "■ PAUSE" appears. CD play is paused at the point the button is pressed.
---	-------------------------	-------------	--

To resume CD play:

6	Press the PLAY button.	 ▶ PLAY	"■ PAUSE" goes off and "▶ PLAY" appears. CD play resumes from the point the pause button was pressed.
---	------------------------	------------	---

To stop CD play:

7	Press the STOP button.	 ■ STOP	15 62' 03"
---	------------------------	------------	------------

NOTE:
• "00" is displayed on the track number section of the display for several seconds after the disc is set, while the data on the number of tracks, playing time, etc., is being read from the disc. After this, the number of tracks and total playing time appear.

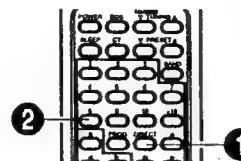
Various CD Play Functions

(Insert the disc before performing the following operations.)

① Playing Certain Tracks

Example: Playing the 8th track
Perform this operation from the remote control unit.

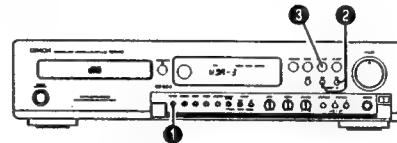
DIRECT SELECTION



- ① Press the DIRECT button.
- ② Press track button "8". "TRACK 8" appears on the display, and the 8th track begins playing.
- When the end of the track is reached, play continues on to the next track.

- For track numbers of 11 and higher, for example 15, press **[+10]** and **[5]**. For track numbers of 20 and higher, for example 23, press **[+10]**, **[+10]**, and **[3]**. For track number 20, press **[+10]** and **[10]**.

② Playing 1 Track Repeatedly

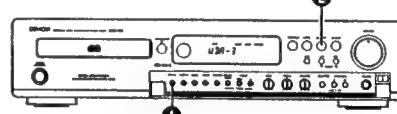


- ① Press the REPEAT button once.
- ② Press the **◀◀** or **▶▶** button, and select the desired track.
- ③ Press the play button (**▶**) to start play.

1 TRACK REPEAT

- When the specified track finishes playing, the pickup returns to the beginning of that track and play is repeated.
- If the REPEAT button is pressed once during play, the track will be played repeatedly.
- If the REPEAT button is pressed once during programmed play, the track will be played repeatedly.
- If the REPEAT button is pressed once while the disc is stopped, the "REPEAT 1" indicator lights and the 1 track repeat play mode is set.

③ Playing All Tracks Repeatedly



- ① Press the REPEAT button twice.
- ② Press the play button (**▶**) to start play.

ALL TRACKS REPEAT

- When the last track finishes playing, the pickup returns to the first track of the disc and play is repeated.
- If the REPEAT button is pressed twice during play, the disc will be played repeatedly.
- If the REPEAT button is pressed twice during programmed play, the program will be played repeatedly.
- If the REPEAT button is pressed twice while the disc is stopped, the "REPEAT ALL" indicator lights and the all tracks repeat play mode is set.

④ Playing a Specific Section Repeatedly

Example: The CD has a total of 15 tracks

1st time	(1) Press the REPEAT button during CD play.	 TRACK 03 M REPEAT 1	"REPEAT 1" lights up, and only that track is played repeatedly, and that track number lights.
	(2) Press the REPEAT button before CD play.	 TRACK 15 M REPEAT 1	"REPEAT 1" lights up, and the total number of tracks lights, and then ① the first track is repeated by pressing the play button ② when play is started by direct selection from the remote control or with the ▶▶ or ◀◀ button, only those selected tracks are played repeatedly.
2nd time	Press the REPEAT button before CD play or during CD play.	 REPEAT TRACK 03 M REPEAT ALL	"REPEAT ALL" lights up, and the track numbers contained on the disc light up on the music calendar, and all tracks are played repeatedly.
	Pressing the REPEAT button once again returns the player to regular CD play.		

⑤ Playing Certain Tracks in any Desired Order
(Perform this operation from the remote control unit only.)

Example: Programming track 3 to play first, track 18 to play second, on a CD with 18 tracks and a total playing time of 62 minutes, 3 seconds.

Setting and Playing the Program

1	Press the PROGRAM button.	
2	Set track 3 to play first.	
3	Set track 18 to play second.	
4	Press the play button.	

After 2 seconds
The display when track 3 is set to play first
Time of first track: 8 minutes, 00 seconds

After 2 seconds
The display when track 18 is set to play second
Total time of tracks 1 and 2: 16 minutes, 05 seconds

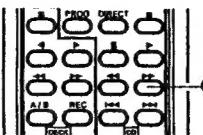
The tracks start playing in the programmed order.

- The numbers of the programmed tracks go off once the tracks are played.
- "— M — S" appears on the display. If a track number of 21 or higher is set in the program.
- When a program is set during CD play after a direct selection, the track currently playing is set as the first track in the program.
- Up to 20 tracks of your choice from among track numbers 1 through 99 can be programmed with this CD player.
- If you attempt to set a track number that is greater than the number of tracks on the disc, that track number will not be displayed when the buttons are pressed.
- Programming is also possible when the disc tray is open. In this case, track numbers greater than the number of tracks on the disc can be programmed, but these are ignored when the disc is played.
- The entire program is cleared when the disc tray is opened (by pressing the Δ button).
- Other operations possible during programmed play:
The quick search, pause, skip monitor, and other operations can be used during programmed play. To move to the beginning of the previous track with the quick search operation, press $\text{FF} \text{ / } \text{R}$ once, then once again while the time display reads "00:00". To move to the beginning of the following track, press $\text{FF} \text{ / } \text{R}$ once, regardless of the time display.
- Perform programming and canceling in the stop mode.
- Programming is also possible in the same way using the PROG button on the CD player. (In this case, use the $\text{FF} \text{ / } \text{R}$ button to select the track number, the PROG button as the memory button. In other words, first press the PROG button, next press the $\text{FF} \text{ / } \text{R}$ button to select the track number, then press the PROG button again to set the track in the memory. For the second track as well, press the $\text{FF} \text{ / } \text{R}$ button then the PROG button.)

PROGRAMMED SELECTION

QUICK SEARCH

⑥ Moving to the Next Track During CD Play
(Perform this operation from the remote control unit.)

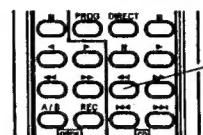


① Press the auto search forward button (FF).

- Each press of the auto search forward button (FF) moves the pickup to the beginning of following tracks.

QUICK SEARCH

⑦ Moving Back to the Beginning of the Current Track During CD Play
(Perform this operation from the remote control unit.)



① Press the auto search backward button (R).

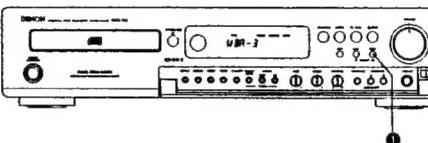
- Each press of the auto search backward button (R) during the search operation moves the pickup to the beginning of previous tracks.

SKIP MONITOR

⑧ Searching for Tracks While Listening to the Sound

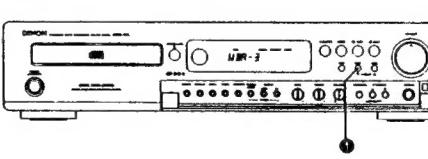
- Use this to skip through a disc listening to the sound at high speed. This function is convenient when searching for a certain section within a long track.
- Use the skip monitor function to find the desired position, then release the search button to start regular playback from there.

① Forward skip monitor



① During CD play, press and hold in the forward search button ($\text{FF} \text{ / } \text{R}$) to skip forward while listening to the sound.

② Backward skip monitor



① During CD play, press and hold in the backward search button ($\text{R} \text{ / FF}$) to skip backward while listening to the sound.

- The track number and elapsed playing time of the track being skipped through are indicated on the display.
- If the end of the last track on the disc is reached while pressing the search button, (E) appears on the display and the skip monitor operation stops. To resume CD play, press the search backward button ($\text{R} \text{ / FF}$) until (E) switches to the track number, then perform a different operation.

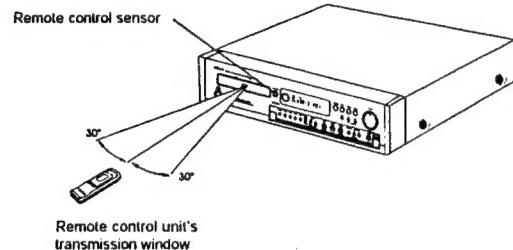
- The track number and elapsed playing time of the track being skipped through are indicated on the display.
- If the beginning of the first track on the disc is reached while pressing the search button, (E) appears on the display and the skip monitor operation stops. To resume CD play, press the search forward button ($\text{FF} \text{ / } \text{R}$) until (E) switches to the track number, then perform a different operation.

If the forward or backward skip button is pressed during programmed CD play and released at a track which has not been programmed, the next programmed track will be played once that track has been played to the end.

12 REMOTE CONTROL UNIT

Cautions on Use

- The RCD-100 is supplied with a remote control unit (RC-814) for system control.
- Replace the batteries with new ones when the transmission distance possible with the remote control unit shortens.
- For longer battery life, remove the batteries when not using the remote control unit for long periods.
- When replacing batteries, use two new batteries. Never use an old battery with a new one.
- Do not use two different types of batteries.
- Do not heat batteries or take them apart.
- Be careful that the remote control sensor is not exposed to direct sunlight or strong light from lighting fixtures.
- The remote control sensor is located on the receiver. Point the remote control unit at the sensor, then press the buttons for the desired operation.
- Operate the remote control unit within the range illustrated in the diagram.



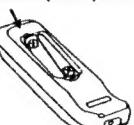
- Do not press buttons on the remote control unit and on the main unit at the same time. Doing so will lead to a malfunction.
- If  appears on the receiver display due to incident light even though the remote control unit has not been operated, it is best to move the set or place it in a different direction. Even if this happens, it will not cause a malfunction with remote control unit.
- When adjusting the volume continuously with the remote control unit, the volume adjustment will stop if the remote control unit is moved away from the remote control sensor. Should this happen, press the button again to continue changing the volume.

Inserting the Batteries

- Open the battery case lid on the back of the remote control unit.



- Insert the two batteries (R6/AA) in the proper direction.



- Set the battery case lid back in place.



 appears at the upper left corner of the receiver display when a signal is received.

- The remote control unit can be used at a distance of about 7 meters from the remote control sensor, but this distance will be shorter if there are obstacles in the way or if the remote control is operated from an angle.

POWER

Press this to switch on the power for the entire system or set the system to standby.

SLEEP

Press this to set the sleep timer.

Number buttons

After pressing TUNER, these buttons call up the preset stations. When used with CD play, after pressing DIRECT or PROGRAM, these buttons specify the tracks to be played.

Operating the Cassette Decks

Stop button (■)
Press this to stop the tape deck.

Forward play button (►)
Press this to play back or record in the forward direction.

Reverse play button (◀)
Press this to play back or record in the reverse direction.

• **REC button (recording button)**
To set the recording mode when in the stop mode, press this button, then press either the "►" or the "◀" button. When pressed during the recording or recording pause mode, a blank section of approximately 5 seconds is created on the tape, after which the deck is set to the recording pause mode.

Rewind button (◀◀)
Press this to rewind the tape.

Fast-forward button (►►)
Press this to forward the tape.

A/B button
Press this to select the deck to be operated.

FUNCTION (input switching) button

Switches the function TUNER, CD, TAPE and MD/AUX.

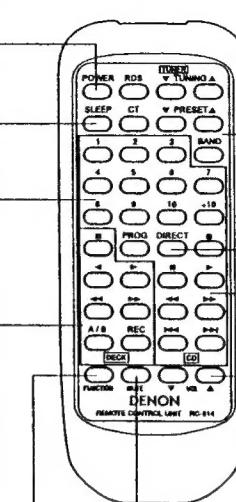
TUNER

• CT (Clock Time) button

When the FM band has been set, a single press of this button will cause the clock display to appear for 2 seconds. Pressing the button again while the clock is displayed, enables the clock to be matched to the time of the RDS broadcast time service.

• Some stations which provide RDS broadcasts do not broadcast CT signals, in which case the time display cannot be corrected by pressing the CT button.

Button Names and Functions



CD Play

DIRECT button
Press for direct track selection of CD player.

PROGRAM button
Press for programmed selection of CD player.

Operating the CD Player

Pause button (II)
Press to temporarily stop CD play. Press the play button ► to resume play.

Stop button (■)
Press to stop CD play.

Play button (►)
Press to start CD play.

Manual search backward button (◀◀)
Manual search forward button (►►)
Press these to quickly move backward or forward.

Backward skip monitor button (I◀)
Press during CD play to go back to the beginning of that track. Press the button again within 0.5 seconds to go back to the beginning of the previous track.

Forward skip monitor button (I►)
Press during CD play to go forward to the beginning of the next track. Press the button again to go forward to the beginning of the track two tracks ahead.

VOLUME

Adjusts the volume. Press ▼ to lower the volume, and ▲ to raise it.

Press this button to listen to the preset stations.

• BAND button

Use this to select the FM or AM band. When this button and number button is pressed in the standby condition, the power is automatically switched on.

• TUNING buttons

Use these to tune in FM or AM stations.

• PRESET buttons

Use these to select preset stations. When this button is pressed in the standby condition, the power is automatically switched on.

• RDS (Radio Data System) button

This button is used for the RDS search, PTY search and TP search operations.

13 IMPORTANT INFORMATION

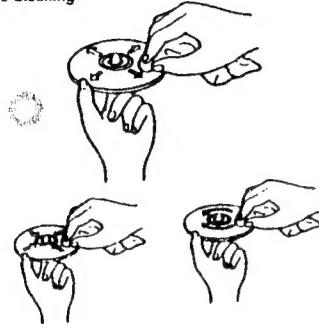
• Head Cleaning

After the cassette deck has been used for a while, powder from the tapes and dirt adhere to the head and lower the sound quality. Use a head cleaning cassette tape to clean.

NOTE:

Some of the cleaning sets on the market have a strong polishing effect which can damage the head.

• Disc Cleaning



Never use the following to clean discs:

- Solvents such as benzene or alcohol
- Cleaners containing abrasives
- Record sprays or cleaners
- Anti-static products

• Head Demagnetizing

The heads become magnetized after the deck has been used over a long period of time or if the heads are exposed to a magnetic field. This results in noise and reduced treble. In addition, there may be a reduction of the treble range of recorded tapes as well as noise produced on these tapes. When the heads become magnetized, use one of the cassette tape head demagnetizers (erasers) available on the market to demagnetize the heads.

- For details, read the operating instructions of the demagnetizer.

Dust, fingerprints, or spittle on the disc can cause noise or skipping.

If the disc is dirty or if the player does not work properly, clean the disc as follows:

- Hold the disc as shown in the diagram, with the signal surface facing up (and the labelled side facing down).
- Using a soft cloth, wipe the disc gently from the inside straight towards the edges (as shown by the arrows).

- Do not wipe from the edges towards the center, or around the disc as you would wipe records.
- Do not use hard cloths or rub the disc forcefully, since the signal surface is susceptible to scratches.

14 SPECIFICATIONS

■ Receiver

• Tuner

Reception Frequency Range:

FM: 87.50 MHz to 108.00 MHz

AM: 522 kHz to 1611 kHz

FM: 1.5 μ V, 75 ohms (SN ratio 30 dB)

AM: 20 μ V (SN ratio 20 dB)

40 dB (1 kHz)

Receiving Sensitivity:

45 W + 45 W (1 kHz, 4 ohm)

6.3 mm headphone jack

100 Hz \pm 8 dB

10 kHz \pm 8 dB

100 Hz/10 kHz +6dB/+3dB

MD/AUX: Input jacks, recording output jacks

TAPE: Input jacks, recording output jacks

434 (W) x 94 (H) x 342 (D) mm (17-5/64" x 3-45/64" x 13-30/64")

7.5 kg (16 lbs 8 oz)

AC 230 V, 50 Hz

110 W

■ CD Player

Wow and Flutter:

Below measurable limits (\pm 0.001 % W. Peak)

Sampling Frequency:

44.1 kHz

Light Source:

Semiconductor

■ Remote Control Unit (RC-814)

Type:

Infrared pulse

Number of Buttons:

40

Dimensions (max.):

525 (W) x 150 (H) x 18.3 (D) mm (2-1/16" x 5-8/9" x 12/16")

Weight:

100 g (Approx. 3.5 oz) (including batteries)

- Maximum dimensions include controls, jacks, and covers.

(W) = width, (H) = height, (D) = depth

- For improvement purposes, specifications and functions are subject to change without advanced notice.

15 TROUBLESHOOTING

1. Check that the connections are proper.
2. Check that you are operating the system according to the instructions in the manual.
- Check the following table if the system does not seem to be working properly.
- If the problem is not solved after checking these points carefully, the system may be malfunctioning. Switch off the power and contact your store of purchase.

	Symptom	Cause	Measures	Page
Common	Power does not come on when ON/STANDBY button pressed.	Power cord not plugged into outlet.	Plug cord into outlet properly.	8
	No sound produced from speakers.	VOLUME control set to minimum. Headphones are plugged in. Speaker cables not connected to speaker terminals. The Relay is affected by clicking noise at intervals.	Turn VOLUME control clockwise (↻) Disconnect headphones. Connect speaker cables properly. Short-circuit with connection cord near speaker terminal. Check connection cord again.	9 9 8 8
	Treble not produced. Orientation of sound field not clear.	Speaker polarities (+ and -) not matched.	Connect speaker cables properly.	8
	Source other than the desired one is heard.	Function selector button not set properly.	Set to desired function.	9
Receiver	Hissing noise heard during FM reception.	Antenna not pointed in proper direction. Signals weak.	Change direction of antenna. Install outdoor antenna.	8 8
	Hissing or scratchy noise heard during AM reception.	Noise from TV, etc., or interference from other stations.	Turn off TV. Change position of loop antenna. Install outdoor antenna.	- - 8
	Hum noise heard during AM reception.	Signals coming over power cord are modulated by power source frequency.	Plug in cord in opposite direction. Install outdoor antenna.	8 8
CD Player	Disc loaded but total number of tracks not displayed.	Disc loaded upside-down. Disc dirty. Non-standard disc loaded.	Reload disc. Clean disc. Replace with standard disc.	16 20 16
	Operation not performed when buttons pressed, or playback stops in middle of track.	Disc loaded upside-down. Foreign object in disc holder. Disc dirty. Disc scratched.	Reload disc. Remove disc and remove foreign object. Clean disc. Replace with non-scratched disc.	16 16 20 -
	Sound skips.	Dust, fingerprints, or spindle on disc. Disc scratched. Player set in shaky, unstable place.	Clean disc. Replace with non-scratched disc. Set player in stable place.	20 - -

Normal operation may not be possible if there is dirt or other substances on the surface of the internal objective lens or sensor.

These parts must be cleaned periodically depending on the place of installation.
For details, contact your store of purchase.

Avoid using ultrasonic humidifiers nearby.

If ultrasonic humidifiers are used nearby, the calcium, etc., included in the water may be scattered into the air, causing white dust to accumulate on the surface of the objective lens or sensor, resulting in improper operation.

When Condensation Forms

The signals of the disc may not be read and this product will not operate properly. To remove the condensation, take out the disc and switch on the power. The condensation will evaporate within 1 hour and the set will operate normally.

This system consists of precision components using microprocessors. Avoid using it in places where there is much external noise. If used in such places, the system may not operate properly, but this is not a problem with the system. If the system does not operate properly, try performing the desired operation again.